

What is claimed is:

1. A braking device for a magnetic tape apparatus comprising:

a switching unit for, as a rotational direction of a capstan motor is changed, selecting a first path along which a rotation of the capstan motor is transmitted through gears to a take-up reel table or a second path along which the rotation of the capstan motor is transmitted through gears to a supply reel table, the switching unit including a clutch having an output gear that transmits the rotation to the take-up reel table or to the supply reel table, the clutch switching the output gear between a slide rotation mode and a direct-coupled mode with respect to an input gear connected to the capstan motor;

a brake for breaking the take-up reel table;

15 a loading motor for driving the brake and loading a magnetic tape; and

an end sensor for detecting a tape end of the magnetic tape,

wherein, when the switching unit selects the first path
20 in the direct-coupled mode, a fast forward mode is designated,

wherein, based on a detection signal received from the end sensor that has detected the tape end during the operation in the fast forward mode, the capstan motor is rotated in reverse while the clutch is maintained in the direct-coupled mode, then,
25 the switching unit selects the second path to halt a feeding

rotation of the supply reel table, and the supply reel table
is reversely rotated through the switching unit in a take-up
direction for a predetermined period of time, and thereafter,
the capstan motor is halted and the rotation of the loading
5 motor is started to halt the take-up reel table by the brake,
and in conjunction with the braking timing, the clutch is changed
to the slide rotation mode,

wherein the switching unit includes the input gear, the
output gear, and an idler gear that engages with the output
10 gear, the idler gear is moved forward or in reverse around the
output gear between a first position, whereat the idler gear
engages with a first gear for rotating the take-up reel table,
and a second position, whereat the idler gear engages with a
second gear for rotating the supply reel table,

15 wherein the clutch includes a main gear for constantly
engaging with the output gear, and a switching gear displaced
between an engagement position and a disengagement position
relative to the input gear, and

wherein between the engagement position and the
20 disengagement position the switching gear is displaced by a
mode lever that is displaced by the rotation of the loading
motor.

2. A braking device for a magnetic tape apparatus
25 comprising:

a switching unit for, as a rotational direction of a capstan motor is changed, selecting a first path along which a rotation of the capstan motor is transmitted through gears to a take-up reel table or a second path along which the rotation of the 5 capstan motor is transmitted through gears to a supply reel table, the switching unit including a clutch having an output gear that transmits the rotation to the take-up reel table or to the supply reel table, the clutch switching the output gear between a slide rotation mode and a direct-coupled mode with 10 respect to an input gear connected to the capstan motor;

a brake for breaking the take-up reel table;

a loading motor for driving the brake and loading a magnetic tape; and

an end sensor for detecting a tape end of the magnetic 15 tape,

wherein, when the switching unit selects the first path in the direct-coupled mode, a fast forward mode is designated, and

wherein, based on a detection signal received from the 20 end sensor that has detected the tape end during the operation in the fast forward mode, the capstan motor is rotated in reverse while the clutch is maintained in the direct-coupled mode, then, the switching unit selects the second path to halt a feeding rotation of the supply reel table, and the supply reel table 25 is reversely rotated through the switching unit in a take-up

direction for a predetermined period of time, and thereafter,
the capstan motor is halted and the rotation of the loading
motor is started to halt the take-up reel table by the brake,
and in conjunction with the braking timing, the clutch is changed
5 to the slide rotation mode.

3. The braking device according to claim 2, wherein the
switching unit includes the input gear, the output gear, and
an idler gear that engages with the output gear, the idler gear
10 is moved forward or in reverse around the output gear between
a first position, whereat the idler gear engages with a first
gear for rotating the take-up reel table, and a second position,
whereat the idler gear engages with a second gear for rotating
the supply reel table.

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4. The braking device according to claim 3, wherein the
clutch includes a main gear for constantly engaging with the
output gear, and a switching gear displaced between an engagement
position and a disengagement position relative to the input
20 gear.